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Application #09/940,966(Edward Chow) Nguyen Art Unit 2832
Brief and Petition to the Board of Appeal, in respond to Advisory
Action dated Aug 23/2004

COMMISSIONER FOR PATENTS

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Attention: BOARD OF APPEAL
Submission: Notice and Brief of Appeal

Inventor Edward Chow (small entity)
1009 West 47th Avenue
Vancouver, BC V6M 2L3, CANADA

Title Multiple Concentric Coil Wattage Converter

Filing Date 08/29/2001

First Office Action 09/18/2003

Application Number 09/940966

Examiner Tuyen T. Nguyen Art Unit 2832

Confirmation Number 2908 Ref No 7590

PTO Mailing Date 08/23/04

11/19/2004 EABUBAK1-00000029 09940966

01 FC:2401
02 FC:2402

170.00 OP
170.00 OP

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Sir:

**This is in response to examiner's THIRD AND
FINAL OFFICE ACTION AND ADVISORY ACTION .**

Dated: August 23, 2004.

A Notice of Appeal is hereby filed. A Brief
consisting of five parts plus five attachments is also submitted
herewith for your consideration.

An International Money Order for the sum of
US\$170+170= US\$340.00 Is also enclosed to cover the
required fees.

11/19/2004 EABUBAK1 00000029 09940966

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BRIEF: PART #1

The primary examiner has misclassified this present art. It was incorrect to place this present art into classification class/subclass 336/195, because this art belongs in its own classification, as a D.C. type of converter. Class 336 is for "inductive device" or conventional A.C. transformers

The primary examiner compared this art to the A.C. transformers, citing the art of J.Chass US Patent #3,376,533, Class/subclass 336/136 and T.Mcl.Davis US Patent #1,907,400, Class/subclass 330/170 as a conventional A.C. transformer, which this art is not. Therefore, the examiner's final action is invalid.

This present art is a D.C. device and by definition, and not an A.C. transformer. Enclosed is a relevant page from "Electricity Made Simple" authored by well known Henry Jacobowitz, B.S. quoting

" The transformer, thus, is strictly an a-c device; never connect to d.c.!" This statement definitively verifies that the present art is not a "transformer", but a D.C. type of converter.

See Reference sheet for Part #1 , attached

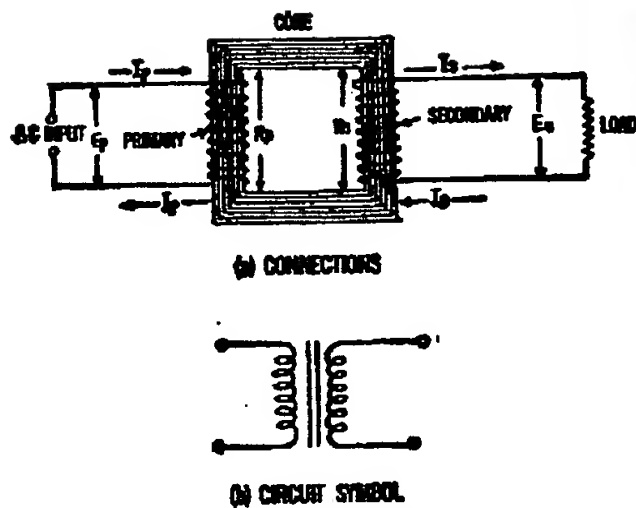


Fig. 117. Elements of Simple Transformer

coils are electrically insulated from each other, but are linked by common magnetic flux. One coil, the primary winding, is connected to the a-c voltage supply (generator), while the other coil, called the secondary winding, is connected to a load, which may be any electrical device whatever. The transformer thus transfers electrical energy from the primary circuit to the secondary circuit without a direct connection and permits at the same time a step-up or step-down of the primary voltage or current. The magnetic flux in a transformer may link the coils either through an iron core or an air core, the latter being used at relatively high a-c frequencies (called radio frequencies). Iron core transformers are generally either of the core type, with the coils encircling the iron core; or of the shell type, with the core surrounding the coils (Fig. 118).

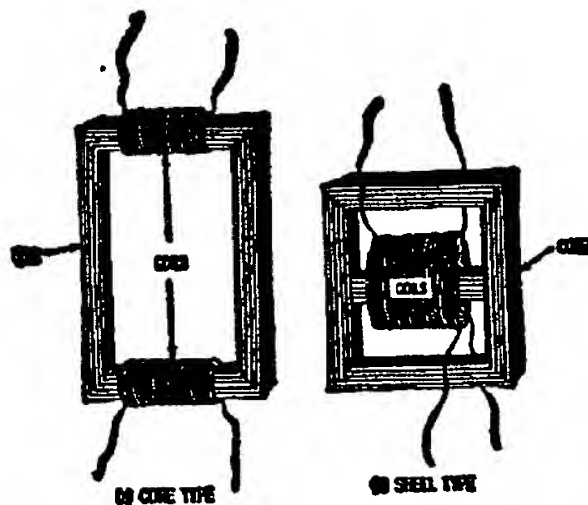


Fig. 118. Construction of Core-Type (a) and Shell-Type (b) Iron Core Transformers

Ideal Transformer. With the primary winding

connected to an a-c supply, the alternations of the primary current set up an *alternating* magnetic field in the core that is continually expanding, collapsing, and building up again in the opposite direction. This alternating flux induces an alternating (a-c) voltage in the secondary winding, and can supply a current through a closed secondary circuit. The variations in the flux, which produce the secondary emf, also affect the primary winding (due to its self-inductance), and by Lenz's Law, induce in it a counter emf that opposes the a-c voltage applied to the primary winding. The value of this counter emf is *almost equal* to the applied voltage, when no current is drawn from the secondary winding and, hence, very little current flows through the primary under no-load conditions. The small current that does flow is known as the no-load or magnetizing current, since it magnetizes the core. When a current is drawn by the secondary load, a proportional current flows through the primary, as we shall see later. If the primary of a transformer is connected to a d-c voltage, a voltage is induced in the secondary for the *instant* during which the magnetic field is building up, but this voltage collapses immediately, as soon as the field reaches a steady (unchanging) value. Because of the absence of a counter emf for d-c, the primary current will be large, and since the d-c resistance of the winding is small, the primary winding will burn out. The transformer, thus, is strictly an a-c device; never connect it to d-c.

In a transformer having a closed iron core practically all the lines of force produced by the primary winding link every turn of the secondary winding and the leakage flux is almost zero. A transformer without leakage flux transfers all the energy from the primary to the secondary winding and, for this reason, is called an ideal transformer. Some of the larger commercial transformers come close to being ideal transformers.

A few simple relations hold for ideal transformers which are also approximately correct for most practical transformers. As we have seen, the voltage induced in the primary winding for a given magnetic flux is proportional to the number of turns of the primary ($E = N \frac{\Delta\phi}{\Delta t}$). Since in an ideal transformer (one without flux leakage) every turn of the secondary is linked by this same magnetic flux, the voltage induced in the secondary winding is proportional to the number of turns in the second-

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BRIEF: PART #2

The applicant maintains that some of the objections raised by the prime examiner were basiccally answered by these positive test results, which were provided in the applicant's first response to the examiner's 1st Action.

It appears that the examiner chose to ignore this proof-of-principle for this present art, which were positive-proof-of-the -principle for this present art.

The extent of the prototype testing has gone far beyond the level of what the average inventor provide in the average patent application, and this should be taken into consideration in the judgement of this present art.

See Reference sheet for Part #2, attached.

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Rejection of Claim 1 regarding..."no antecedent basis"

This present art has gone far beyond the theoretical stages, with extensive laboratory testing which has proven both the validity of the theory and practicality of the hardware, up to eight (8) secondary coils as per specification. The applicant had carried out vigorous lab tests on over 48 prototypes of various sizes of coils over a period of most recent 73 months. Tests were under professional supervision. Input power included batteries, regulated power and household 110VAC. Test duration from 1 to beyond 4 hours.

FAILED! EC.

A typical sets of readings is as follows:

Primary coil #1	<u>5.95 VDC</u>	<u>4.52 AMP</u>
Secondary #1	31.05 VDC	4.66 AMP
Secondary #2	41.55 VDC	4.31 AMP
Secondary #3	35.91 VDC	4.94 AMP
Secondary #4	46.66 VDC	5.79 AMP
Secondary #5	38.79 VDC	5.38 AMP
Secondary #6	59.73 VDC	4.86 AMP
Secondary #7	43.85 VDC	5.99 AMP
Secondary #8	40.94 VDC	5.57 AMP

The above results have been replicated again and again.

These tests were subjected to cold winter outdoor environment as well as at sea level and at mountain top level of 3500 feet in

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BRIEF: PART #3

In response to the examiner's rejection of this art on the grounds of "obviousness", the applicaant maintains that he is the inventor skilled in the art of multiple concentric secondary coil converter, and that therefore he is the first inventor of this specific art.

Since the examiner of this art was unable to show any prior art that was in direct conflict with this present art, the concept of "obviousness" becomes quite vague when the details of two prior arts are carefully considered.

For the examiner to believe that any other inventor would have visualized the addition of multiple secondary coil to art of Davis and Chass is a gross illusion.

Neither of these prior arts intended or suitable for such added secondary coils.

Other objections to such coil addition were provided in the applicant's 2nd (final) response.

See Reference sheet for Part #3, attached.



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both summer and winter seasons. Tests were also conducted in basement concrete vaults of commercial buildings

Claim 2: An important aspect of this present converter is to provide flexible wattage levels from such art by the manner in which the multiple coil leads are connected, ie: all secondary coils in series, or parallel, or a combination of both to match the requirements of the load or loads.

Claim Rejections

The rejection of Claims 1-5 as being unpatentable over Davis (US 1,907,400) and in view of Chass (US 3,376,533). The art of Davis (US1,9907,400) is viewed by the applicant as being substantially different from the present transformer/converter art.

- The art of Davis discloses only a single secondary coil over a single primary coil which is separated by an "electrolysis" which substantially reduce the natural magnetic flux transfer from the single primary coil to the single secondary coil.

There is no indication in the specification or claims of additional secondary coil windings, and in Davis' alternative designs adjacent and separated primary and secondary coils are shown and claimed.

- The art of Chass (US 3,376,533)

The art of Chass discloses multiple secondary

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BRIEF: PART #4

The applicant clearly explained the various components and their function in this art, so that this final rejection by the primary examiner is not fully understood, by the applicant.

When the examiner questions the basis for the single primary windings and the clarification of the secondary coils, it becomes clear that he does not understand the full functioning of Oersted's magnetic flux!

Oersted's magnetic flux within any EMF conductor consists of a central "E"/electron flow with a magnetic helical flow over it, to produce normal EMF, AT 60 HZ, or as inductive D.C.

The fact that magnetic flux helical path is close to the electrical wire O/D, facilitates the transfer of it from the primary coil to other secondary coils, as described in the background and claims of this present art.

See Reference sheet for Part #4, attached.

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Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-5 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 1, applicant should clarify what is intended by "multiple secondary windings directly wound over each other, *and over the first, single primary windings.*" There is no antecedent basis for "the first, single primary windings." Claims 2-5 inherit the defects of the parent claim.

Regarding claim 2, applicant should clarify what is intended by "said secondary coils are magnetically induced to produce an electromagnetic force from the single said primary winding by means of *Oersted's magnetic flux* surrounding any electrical conductors."

*In the text
and in the
CLAIM.*

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

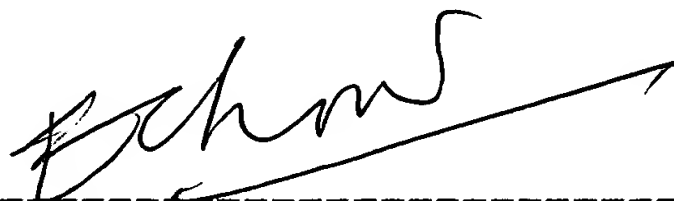
Claims 1-5, as best understood in view the rejections under 35 U.S.C. 112 second paragraph, are rejected under 35 U.S.C. 103(a) as being unpatentable over Davis [US 1,907,400] in view of Chass [US 3,376,533].

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BRIEF: PART 5 CONCLUSIONS

The applicant has amended the specification and claims of this application so that they are proper, definite and defines novel structure which is also unobvious. If for any reason this application is not believed to be in full condition for allowance, the applicant respectfully request the constructive assistance and suggestions of the examiner and the Appeal Board pursuant to MPEP SS 706.03 (d) and SS 707.07(j) in order that the undersigned can place this application in allowable condition as soon as possible and without the need for further proceedings.
THANK YOU VERY MUCH.

Very respectfully



Applicant: Edward Chow Inventor (small entity)
1009 West 47th Avenue
Vancouver, British Columbia V6M 2L3
CANADA

Dated: November 1st, 2004



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From: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, VA 22313-1450

MESSAGE:

1. We acknowledge the receipt of the Petition to
Appeal Board and the Brief consisting of 7 pages
plus 4 reference sheets, a total of 11 pages.
2. We also acknowledge the receipt of an
international money order for the sum of
US\$340.00 to cover the required fees.

KINDLY PUT DATE STAMP HERE:

KEEP THIS SHEET FOR USPTO FILE/RECORD

Please mail back in enclosed self-addressed & stamped envelope

to: Edward Chow, inventor
1009 west 47th Avenue
Vancouver, BC V6M2L3
CANADA

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